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INFORMATION REPORT

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COUNTRY

Hungary

SUBJECT

Surveys for Oil from Szeged to Monor, from Kiskunfelegyhaza to Baja, Field Surveys for Numerical and Aerial Maps/Surveys for River-Irrigation Project on the Danube between Dunafoldvar and Paks

DATE DISTRIBUTED _____

24 June 1957

NO. OF PAGES

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SUPPLEMENT TO REPORT #

THIS IS UNEVALUATED INFORMATION

1. [redacted] the Hungarian-Soviet Oil Enterprise in the Szeged area doing [redacted] sub surface surveys. [redacted] drilled blast holes, set off a charge of dynamite, and from a point at a known distance from the blast hole, measured the time for the blast to be recorded on seismic instruments.
2. [redacted] surveyed one seismic traverse which included stations at Szeged (46 15 N, 20 09 E), Kiskunfelegyhaza (46 43 N, 19 51 E), Kecskemet (46 54 N, 19 41 E), Lajosmizse (47 01 N, 19 32 E) and Monor (47 20 N, 19 27 E). A second seismic traverse [redacted] surveyed included stations at Kiskunfelegyhaza (46 43 N, 19 51 E), Janoshalma (46 18 N, 19 19 E) and Baja (46 10 N, 16 56 E).
3. [redacted] checked for seismic anomalies. [redacted] pinpointed the anomalies. [redacted] surveys showed domes in the areas between Kiskunfelegyhaza (46 43 N, 19 51 E) and Lajosmizse (47 01 N, 19 32 E). [redacted] there was a dome shaped salt concentration in the Vecses area (47 24 N, 19 16 E) approximately 12 thousand feet deep. This area was drilled to 12 thousand feet and proved, but it was considered too deep for further exploitation. [redacted] this salt dome [redacted] was within the Vecses-Bugby-Monor triangle.
4. [redacted] the Budapest Geodetical and Mapping Enterprise (Budapesti Geodezias és Terkepészeti Vallalat). This enterprise was engaged in making mappings for the whole of Hungary, namely topographic maps of a scale 1:5000. [redacted] had both [redacted] both numerical and aerial maps. All the maps [redacted] names and symbols thereon in Hungarian.

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5. The maps [] used [] were scaled at 1:2880. [] were changing to maps scaled at 1:5000 for the following reasons:
- both vertical and horizontal measurements can be put on the 1:5000 maps more accurately,
 - the 1:5000 maps can be kept to a more usable size, and
 - the 1:5000 maps are of international usage, thereby bringing Hungary up to date with the rest of the world.
6. [] crews worked on two phases of map making. The first phase was to produce numerical maps scaled to 1:5000. In this process crews of five to 10 men, including two or three college graduated engineers worked on triangulation surveys using the Swiss made Wylid surveying transits, and on stadia measurements using a special Hungarian instrument, known as the Szepesi reduction tachymeter, which reduces office computations to a minimum. The Szepesi instrument is made by Magyar Optikai Mavek (MOM) in Budapest.
7. [] For each crew of eight or 10 there would be at least one qualified instrument man and two or more qualified assistant instrument men and five or more helpers. The crew head made the rough sketches, allotting the work to be done on a particular work project. The crew head was also responsible for directing the helpers to accurately place their survey flags on the location points designated on the rough sketches.
8. Survey crews computed their field measurements by the use of the transit and the tachymeter. All calculations were made in the field. [] only manually operated calculators. Calculations were usually made in offices or buildings located in villages or towns near our work. These quarters were usually rented or requisitioned for short periods and []
9. After [] field measurements, computations and calculations were completed, [] five rough sketches, drawn to scale, for each area worked. These five rough sketches were sent to Budapest where maps were made by the cartographic division of the Budapest Geodetical and Mapping Enterprise. Our five rough sketches for each area surveyed consisted of the following:
- One sketch with survey stations only marked thereon,
 - A second with names of towns, hills, lakes, etc located thereon,
 - A third sketch with the exact traverse of the surveyed area with all horizontal and vertical measurements thereon,
 - A fourth sketch, called a vegetation map, showing whether the area surface was forest or farmland.
 - The fifth sketch was in the form of an aluminum sheet. This was the final map sketch prepared by the field. Topographic features were put on this sheet in pencil.
10. The cartographic division of the Budapest Geodetical and Mapping Enterprise moved just before the revolution in October 1956 []

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11. The second phase [redacted] was aerial map making. [redacted] 25X1
 field mapping crews were furnished aerial photographs taken by the Hungarian Army. The Hungarian Army was the only organization authorized or permitted to take any aerial photographs. These photographs were treated with great care and respect by the mapping crews. All the aerial photographs and aerial maps [redacted] were marked T U K (Titkos Ugy Kezeles) 25X1
 meaning secret handling of the matter. Aerial photographs and aerial maps were kept in safes even in the field. One man was not allowed to take an aerial photograph or aerial map from the safe. Two or three men working with each crew were cleared for handling the aerial photographs and maps. [redacted] 25X1
12. The aerial photographs [redacted] made available with a 30 to 60% overlap for each designated area to be surveyed and mapped. The work crew was required to identify a minimum of five points on the terrain for each aerial photograph used. For elevation measurements, 20 to 25 points of identification were required.
13. Aerial mapping crews usually consisted of one graduate engineer, an assistant graduate engineer, four or five helpers with technical training and 10 or 12 workers. Part of the crew worked on the terrain identification and part of the crew on elevation measurements. Elevation measurements were accurate and detailed. For a building such as a church, measurements were taken at the top of the cross or spire, at the base of the belfry or spire, and at the ground level of the structure. Any structure like a water tank on a hill would be inserted on the new aerial maps [redacted] Sometimes 25X1
 items like water tanks and small water reservoirs were not posted on the numerical maps (scaled 1:5000) prepared during the first phase of mapping operations. During the second phase of mapping all such items were inserted on both the numerical maps (scaled 1:5000) and on the aerial maps.
14. [redacted] in January 1955 [redacted] 25X1
 about half of Hungary had been covered by aerial photography. The Hungarian Army had the whole country covered by aerial photography by the end of 1955 with most of the work done during the summer months. By the end of 1955 about one-third of the country had been ground surveyed (in conjunction with aerial photography) and maps prepared scaled 1:5000.
15. [redacted] One part of the crew 25X1
 would work on terrain points and the other group on elevation points. If the two groups didn't find the required five points of terrain identification and the 20 to 25 elevation points, they would locate them and put them on the aerial photographs furnished them by the Hungarian Army. These additional identity points would be circled in white pencil on the aerial photographs. The aerial photographs on which appeared insufficient identity points would be returned to Budapest with a request for new aerial photographs of the area in question. When the new aerial photographs arrived in the field, the crews would check to see that all terrain and elevation points were identifiable. Then the mapping crews would put in the co-ordinates of the new identity points. From the numerical maps and the aerial photographs with all their identity points thereon, the mapping crews made rough sketches which were sent to the Budapest Geodetical and Mapping Enterprise. In Budapest finished aerial maps were made by the cartographic division for the Ministry of Defense. These finished aerial maps were never returned to the field to my knowledge.

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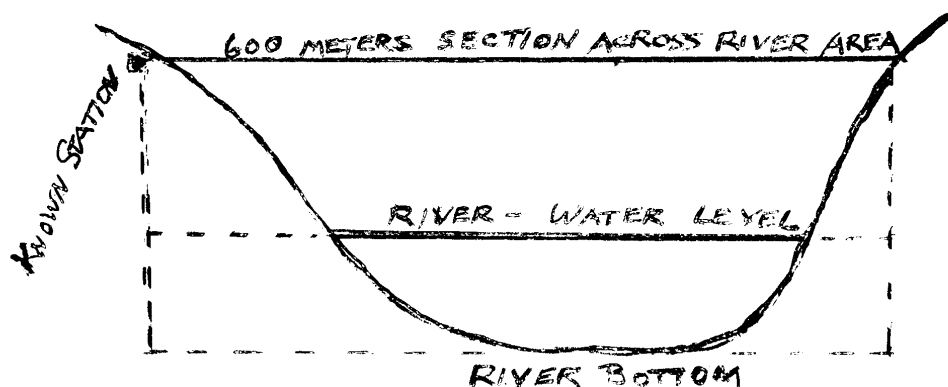
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19. The following two sketches illustrate the type of mapping work done on the irrigation canals on the Danube.

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SKETCH-1



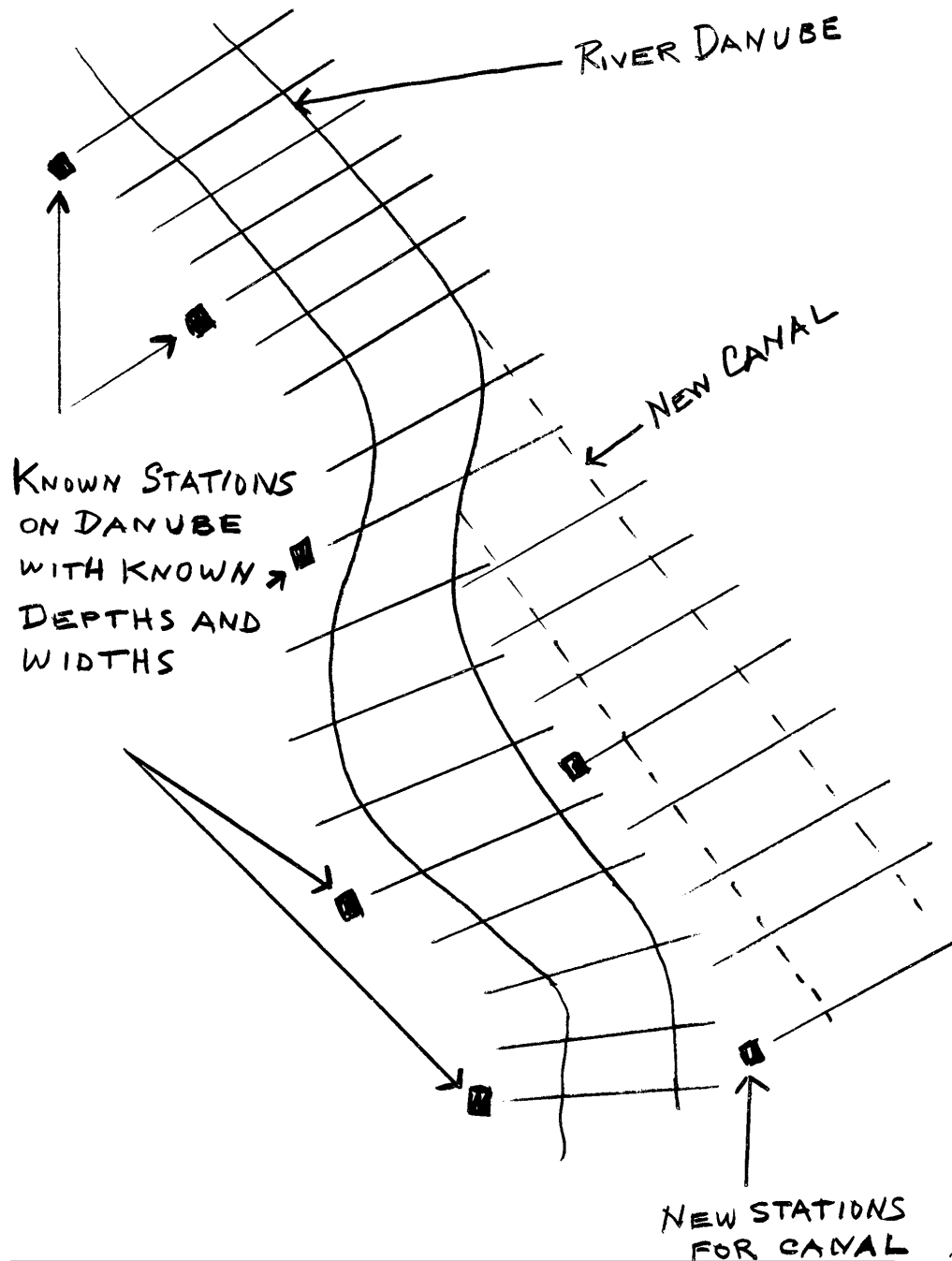
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SKETCH-2



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